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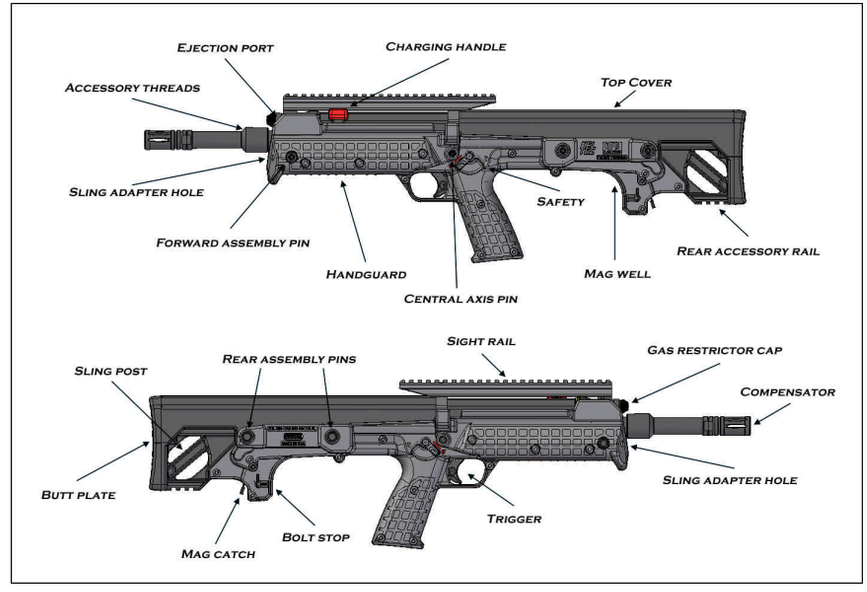
Congratulations! You are now the proud owner of the world's most advanced, 7.62 NATO Caliber, semi-automatic rifle, the ***Kel-Tec Rifle, Forward- ejecting Bullpup, or RFB.*** By reading the instructions and warnings included in this instruction manual, you will ensure that your RFB will provide many years of faithful and reliable service.

Description

The rifle, Forward-ejecting, Bullpup (RFB) is a lightweight, air-cooled, gas operated, semi-automatic, forward ejecting, Bullpup-type rifle which feeds 7.62x51mm NATO cartridges from metric FAL style, self contained, detachable, steel, box type magazines. It is totally ambidextrous, uses a tilting bolt locking mechanism, and a short-stroke gas piston to actuate the bolt carrier.



Construction

The RFB is a revolutionary design utilizing aircraft quality components made on state of the art CNC machinery. Every single aspect of the design has been thoroughly tested to ensure the utmost in reliability, function, and ease of use.
The RFB has a medium weight barrel made of 4140 Chrome-Molybdenum ordinance grade Steel, with a chrome-lined bore and chamber in lengths of 18"/457mm and 24"/610mm is available. The rifling rate of twist is 1 turn in 11.25 inches/285.75mm. All barrels come threaded to accept 5/8–24 TPI muzzle accessories and 18" models come equipped with an A2-style compensator except where prohibited by law.
All sheet metal components are made of aircraft quality 4130 steel. The *bolt* and *receiver* are made of 4140 steel. The gas system on the RFB is made of 4140 steel and internally plated. It is designed to be low maintenance and be corrosion resistant.

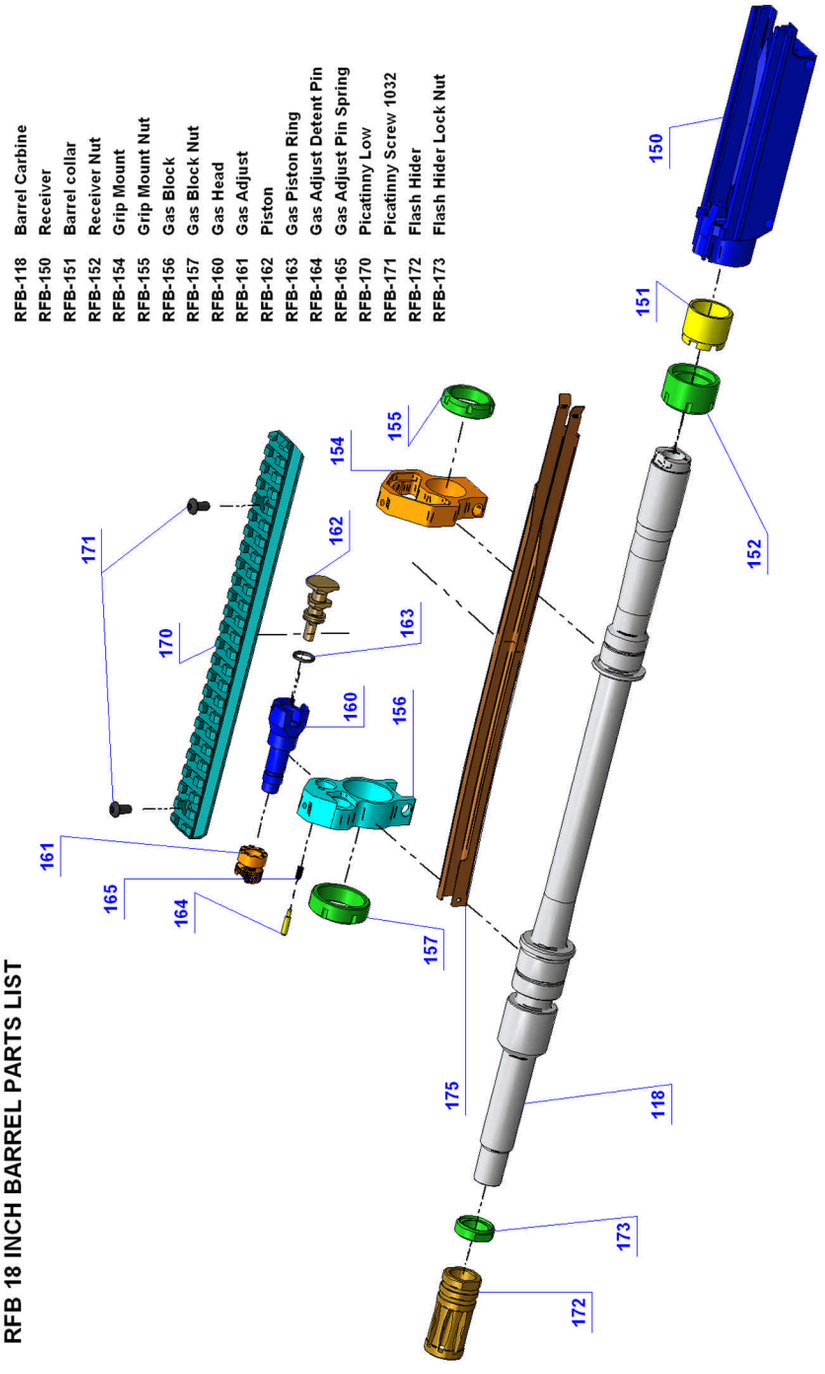
Chart of Design Specifications

Specification	Standard Models	
Caliber	7.62x51mm NATO	
Operating System	Gas Operated, Tilting Bolt	
Firing Modes	Semi-Auto Only	
Magazines Used	Metric FAL style, Self-Contained, Detachable Box type	
Magazine Capacity	5, 10, 20*	
Available Lengths	18"	24"
Barrel Material	4140 Chrome Molybdenum	
Barrel Features	Medium Weight, Chrome Lined	
Rate of Twist	1 turn in 11.25"	
Number of Grooves	6	
Overall Length	27.5"	33.5"
Weight, Unloaded	8.6	9.1
Width	2.1"	
Height	7.7"	
Scope Mount	Mil-STD-1913 Picatinny Rail	
Muzzle Velocity**	2690 fps	2880 fps

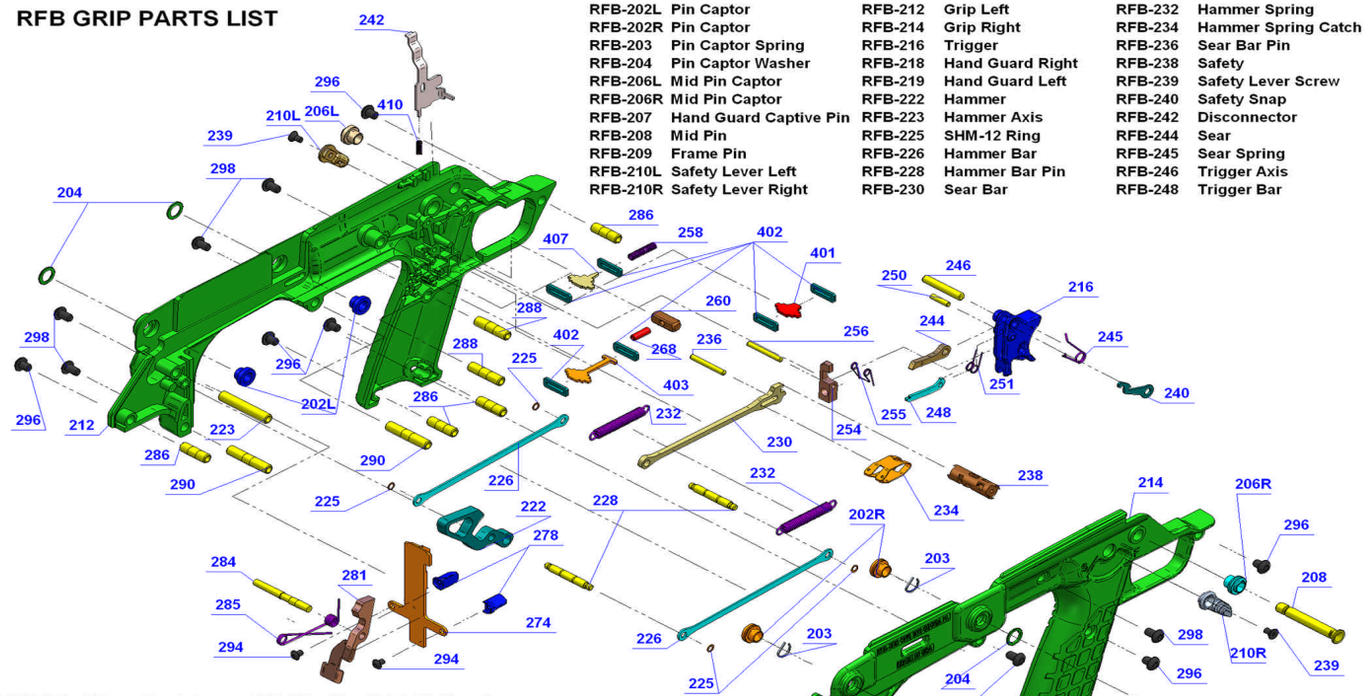
* Magazines Capacities above 20 rounds are not recommend for use.
**Velocities obtained using NATO Mil-Spec ammo loaded with 147 Grn Bullet.

RFB 18 INCH BARREL PARTS LIST

RFB-118 Barrel Carbine
RFB-150 Receiver
RFB-151 Barrel collar
RFB-152 Receiver Nut
RFB-154 Grip Mount
RFB-155 Grip Mount Nut
RFB-156 Gas Block
RFB-157 Gas Block Nut
RFB-160 Gas Head
RFB-161 Gas Adjust
RFB-162 Piston
RFB-163 Gas Piston Ring
RFB-164 Gas Adjust Detent Pin
RFB-165 Gas Adjust Pin Spring
RFB-170 Picatinny Low
RFB-171 Picatinny Screw 1032
RFB-172 Flash Hider
RFB-173 Flash Hider Lock Nut



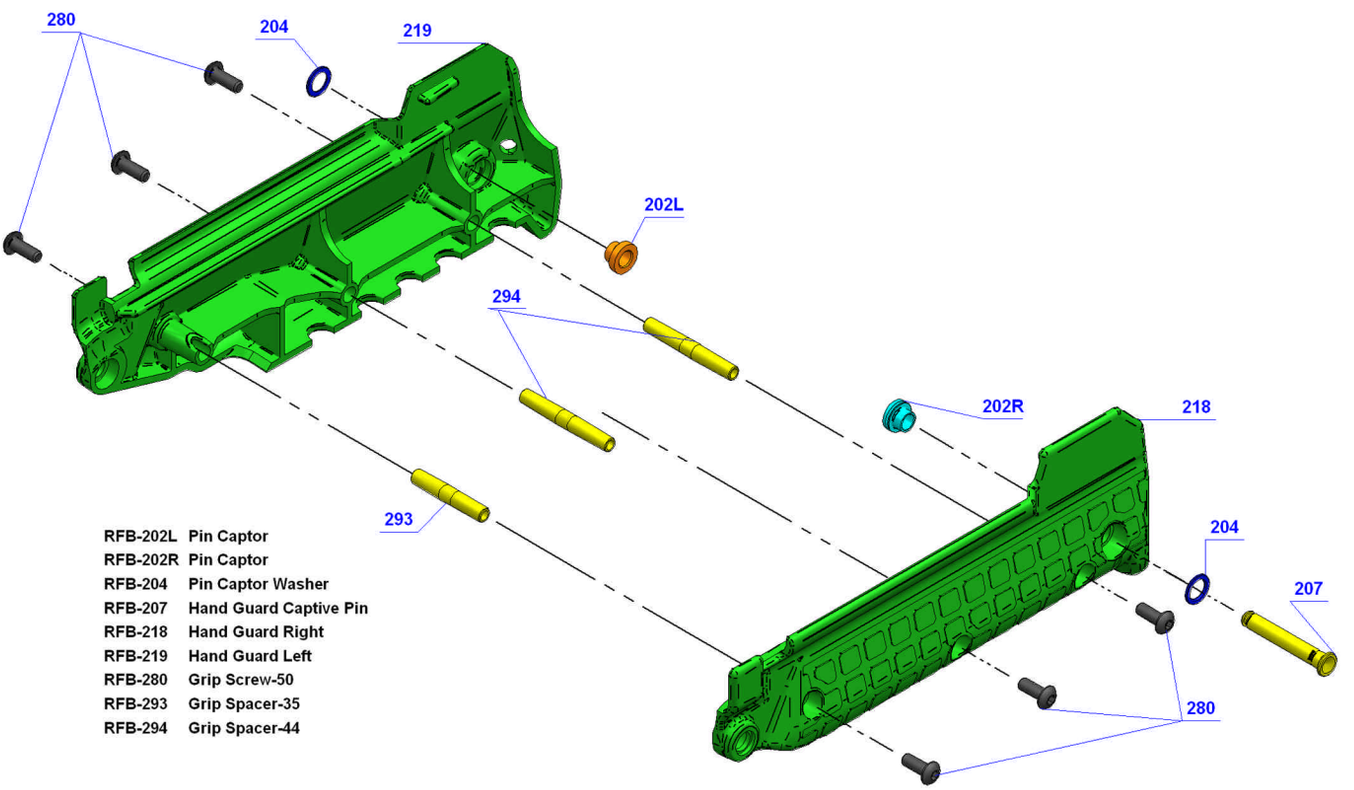
RFB GRIP PARTS LIST



RFB-202L	Pin Captor	RFB-212	Grip Left	RFB-232	Hammer Spring
RFB-202R	Pin Captor	RFB-214	Grip Right	RFB-234	Hammer Spring Catch
RFB-203	Pin Captor Spring	RFB-216	Trigger	RFB-236	Sear Bar Pin
RFB-204	Pin Captor Washer	RFB-218	Hand Guard Right	RFB-238	Safety
RFB-206L	Mid Pin Captor	RFB-219	Hand Guard Left	RFB-239	Safety Lever Screw
RFB-206R	Mid Pin Captor	RFB-222	Hammer	RFB-240	Safety Snap
RFB-207	Hand Guard Captive Pin	RFB-223	Hammer Axis	RFB-242	Disconnector
RFB-208	Mid Pin	RFB-225	SHM-12 Ring	RFB-244	Sear
RFB-209	Frame Pin	RFB-226	Hammer Bar	RFB-245	Sear Spring
RFB-210L	Safety Lever Left	RFB-228	Hammer Bar Pin	RFB-246	Trigger Axis
RFB-210R	Safety Lever Right	RFB-230	Sear Bar	RFB-248	Trigger Bar

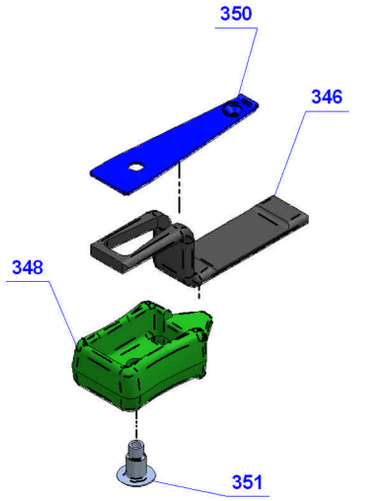
RFB-250	Trigger Bar Axis	RFB-281	Mag Catch Weldment		
RFB-251	Trigger Bar Spring	RFB-284	Mag Catch Axis		
RFB-254	Sear Trip	RFB-285	Mag Catch Spring		
RFB-255	Sear Trip Coil Spring	RFB-286	Grip Spacer-19.6		
RFB-256	Sear Trip Axis	RFB-288	Grip Spacer-24		
RFB-258	Trigger Spring	RFB-290	Grip Spacer-31		
RFB-260	Trigger Adjust Block	RFB-293	Grip Spacer-35	RFB-401	Fixed Trigger Rear Stop
RFB-268	Trigger Stop Screw	RFB-294	Grip Spacer-44	RFB-402	Fixed Trigger Stop Support Plate
RFB-274	Bolt Stop	RFB-294	Bolt Stop Grip Screw	RFB-403	Fixed Trigger Front Stop
RFB-278	Bolt Stop Grip	RFB-296	Grip Screw-25	RFB-407	Fixed Trigger Spring Support
RFB-280	Grip Screw-50	RFB-298	Grip Screw-3125	RFB-410	Disconnector Spring

RFB HAND GUARD PARTS LIST

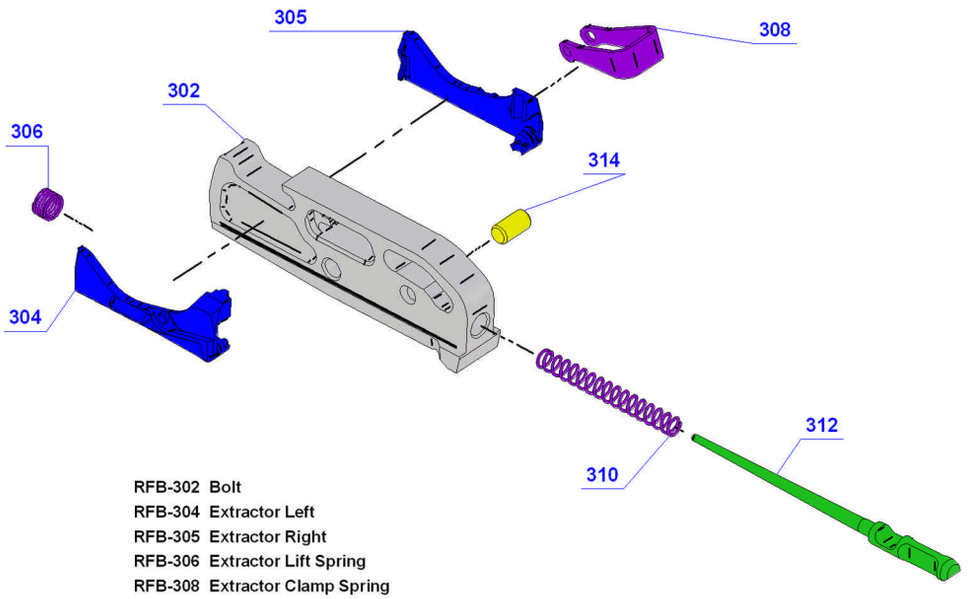


RFB-202L	Pin Captor
RFB-202R	Pin Captor
RFB-204	Pin Captor Washer
RFB-207	Hand Guard Captive Pin
RFB-218	Hand Guard Right
RFB-219	Hand Guard Left
RFB-280	Grip Screw-50
RFB-293	Grip Spacer-35
RFB-294	Grip Spacer-44

RFB OPERATING HANDLE & BOLT PARTS LIST

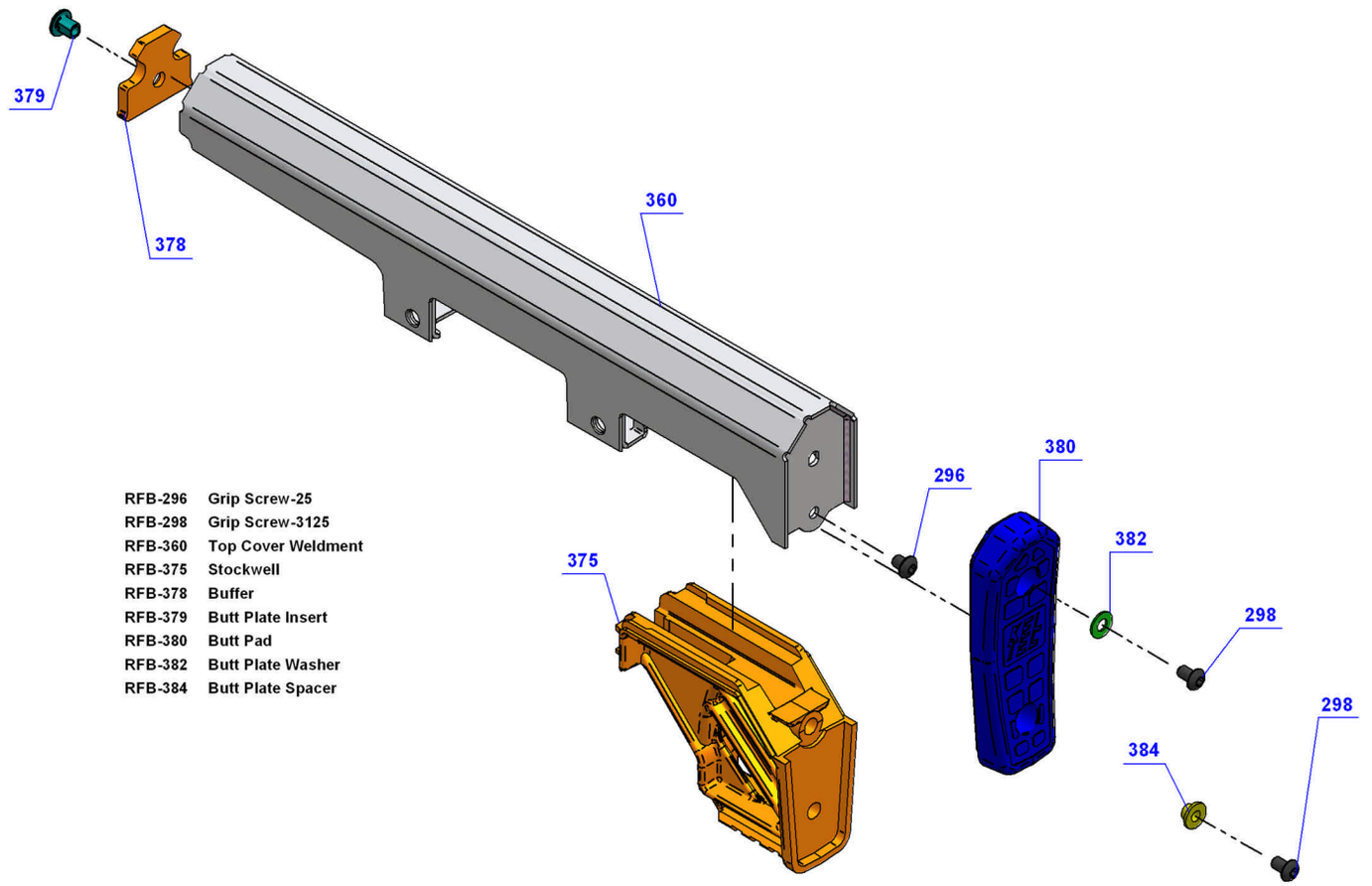


RFB-346 Operating Handle
RFB-348 Handle Molding
RFB-350 Handle Snap
RFB-351 Rivet



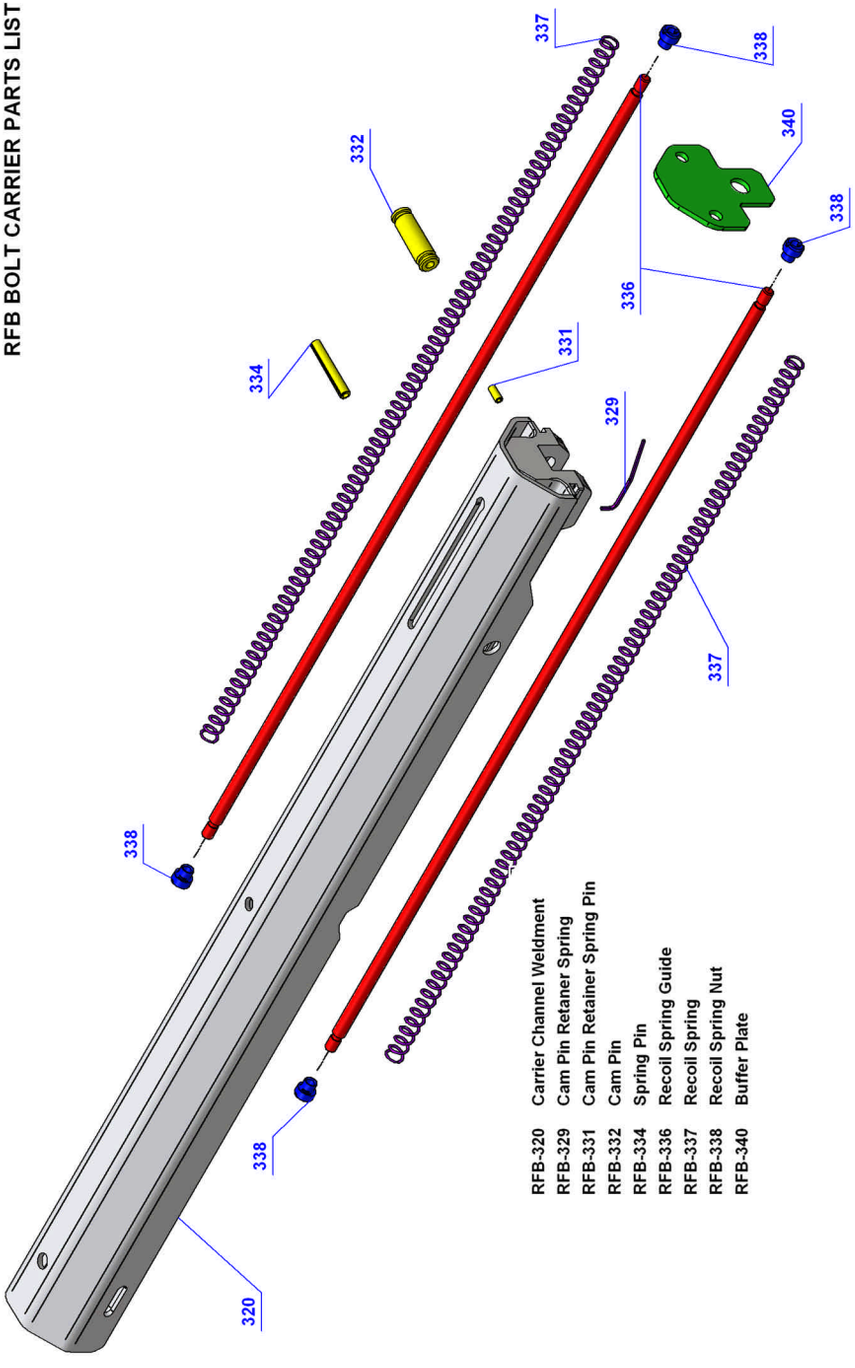
RFB-302 Bolt
RFB-304 Extractor Left
RFB-305 Extractor Right
RFB-306 Extractor Lift Spring
RFB-308 Extractor Clamp Spring
RFB-310 Firing Pin Spring
RFB-312 Firing Pin
RFB-314 Firing Pin Pin

RFB RIFLE TOP COVER PARTS DRAWING



RFB-296 Grip Screw-25
RFB-298 Grip Screw-3125
RFB-360 Top Cover Weldment
RFB-375 Stockwell
RFB-378 Buffer
RFB-379 Butt Plate Insert
RFB-380 Butt Pad
RFB-382 Butt Plate Washer
RFB-384 Butt Plate Spacer

RFB BOLT CARRIER PARTS LIST



RFB-320	Carrier Channel Weldment
RFB-329	Cam Pin Retaner Spring
RFB-331	Cam Pin Retainer Spring Pin
RFB-332	Cam Pin
RFB-334	Spring Pin
RFB-336	Recoil Spring Guide
RFB-337	Recoil Spring
RFB-338	Recoil Spring Nut
RFB-340	Buffer Plate

SAFETY INSTRUCTION & PARTS MANUAL
STATEMENT OF LIABILITY

This SAFETY, INSTRUCTION & PARTS MANUAL should always accompany this firearm and be transferred with it upon change of ownership or when the firearm is loaned, issued, or presented to another person. A copy of the SAFETY, INSTRUCTION & PARTS MANUAL is available FREE upon request and can also be downloaded from the Internet at **http://www.kel-tec-cnc.com/**

READ THESE INSTRUCTIONS AND WARNINGS CAREFULLY, BE SURE YOU UNDERSTAND THESE INSTRUCTIONS AND WARNINGS BEFORE USING THIS FIREARM.

This rifle may be classified as dangerous and is surrendered by KEL- TEC CNC INDUSTRIES INCORPORATED with the understanding that the purchaser assumes all liability resulting from unsafe handling or any action that constitutes a violation of any applicable laws or regulations. This firearm is a tool and like any tool it can cause serious injury or death in its misuse. Safety must be the prime consideration of anyone who handles firearms. Kel-Tec firearms are designed to function reliably with proper care and knowledgeable use. Do not use your firearm unless you fully understand these instructions, and the safe operation of your firearm.

The following rules must always be obeyed when handling any firearm:

1. Always treat a firearm as though it were loaded even when you know it's not. Never accept or pickup a firearm without checking the magazine and the chamber to assure the rifle is empty. Do not trust the extractor to clear the chamber, look and feel.
2. Always keep the muzzle pointed in a safe direction at all times. Never point the rifle at anything you are not willing to destroy.
3. Remember to keep the safety on and your finger straight and off the trigger until you are ready to fire.
4. Always be sure of your target, what lies beyond that target, and any obstacles that may surround that target.
5. Never fire a rifle without wearing safety glasses and hearing protection.
6. Keep the rifle unloaded until it is ready for use.
7. Never shoot at any body of water or any surface where a ricochet can occur.
8. When transporting your firearm, be sure it is unloaded.
9. When firing on a target range, be alert and follow the range officer's commands.
10. Make sure any bystanders are always a safe distance behind you when firing and that proper safety equipment is being used by all present.
11. Never take medications, drugs, or alcohol when handling firearms
12. Never cross obstacles such as fences or streams with a loaded firearm.

CAUTION:

After firing several rounds the exposed metal surfaces forward of the *top cover* become *very hot* and can cause painful burns. Use caution when handling. Wait at least one hour for the metal components to cool before attempting disassembly.

Figure 1: This portion gets very hot during firing

Do not use cleaning solvents or any lubrication on the rifle while it is hot as this may cause microscopic fractures in the surface of the metal and reduce service life.

In owning a firearm, you are responsible for the firearm's safety and security. Take steps to prevent children and inexperienced adults from gaining access to firearms without your supervision. Do not allow a firearm to be used by individuals who do not understand its safe operation and the rules of safe gun handling. Never store firearms and ammunition together.

These warnings and instructions are provided to assure the safe functioning of the rifle. Failure to heed these warnings may result in improper functioning and serious injury. Practice safe handling procedures until they become habit.

Safe gun handling is your responsibility! There are no accidents, only user negligence!

Ammunition Use

The Kel-Tec RFB is designed and chambered for the 7.62x51 NATO Cartridge ONLY. The Caliber is listed on the left side of the rifle above the magazine well. Do not use any other ammunition.

Kel-Tec firearms are manufactured from high quality materials to provide extended service life with appropriate maintenance and use. Only use commercially manufactured ammunition, clean, dry, and in good condition. Never use non-standard, reloaded, corroded, or damaged cartridges. Use of improperly reloaded ammunition may result in case head separations. Never use ammunition where the pressure levels exceed industry standards.

If the gun does not discharge after pulling the trigger, keep it pointed downrange for at least 30 seconds and then unload immediately. This kind of failure to fire could indicate a "hang fire" and the rifle may still discharge after a few moments!

All warranties, expressed or implied, are voided if faulty or inappropriate ammunition is used. Kel-Tec CNC, Inc. will not be liable for property damage or personal injury in such an event.

Use of Sub-Sonic Ammunition with Suppressors

The standard RFB comes equipped with a rate of twist of 1 turn in 11.25" and may not fully stabilize slow moving projectiles that are longer than common 180-grain bullets, such as is commonly found in subsonic 7.62 NATO loadings. Never use ammunition that is heavier than standard if the rifle has a silencer attached, this may result in baffle strikes, which will damage the suppressor.

Figure 2: Baffle Strike caused by Subsonic Ammo

Exposure to Lead

Bullets and Primers contain trace amounts of Lead, which can be released into the air when firing. Discharging firearms in poorly ventilated areas, cleaning firearms, or handling ammunition may result in exposure to Lead

and other substances known to cause birth defects, reproductive harm, and other serious physical injury. Have adequate ventilation at all times. Be sure to wash hands thoroughly with soap and COLD water after any amount of exposure.

Maintenance and Care of your firearm

All firearms require periodic maintenance to ensure safe and reliable functioning. Regular cleaning by the owner and periodic inspection by a certified gunsmith is recommended.

Never alter any components of your firearm. Kel-Tec CNC, Inc. cannot assume liability for injuries suffered due to unauthorized servicing, alterations, or modifications of Kel-Tec firearms. Kel-Tec CNC, Inc reserves the right to refuse service on firearms that have been altered or substantially changed in any way. Be sure all accessories are compatible with the firearm and that the accessories do not interfere with safe operation.

Questions? Comments? Concerns?

If you need help in operating any of our products, have any questions about their safe handling, need something repaired, or you just want to tell us what you think, please write or email us at:

KEL-TEC CNC INDUSTRIES INC
1475 Cox Road
Cocoa FL 32926
Telephone Number: 321-631-0068
Toll free: 1-800-515-9983
Hours: M-F 8am-4pm EST
Website: http://www.kel-tec-cnc.com/
Email: ktcustserv2@kel-tec-cnc.com

How the RFB works

A loaded magazine is inserted straight up, not tilted, into the rifle's magazine well until a "click" is heard.

Figure 3: Insert the magazine straight up

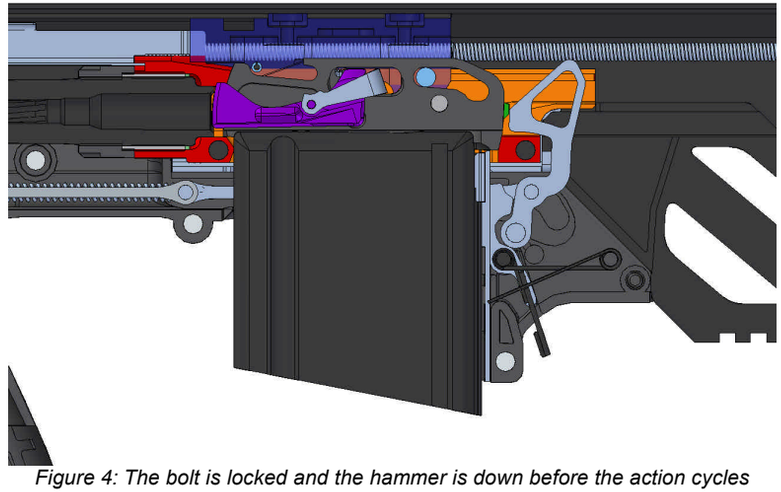


Figure 4: The bolt is locked and the hammer is down before the action cycles

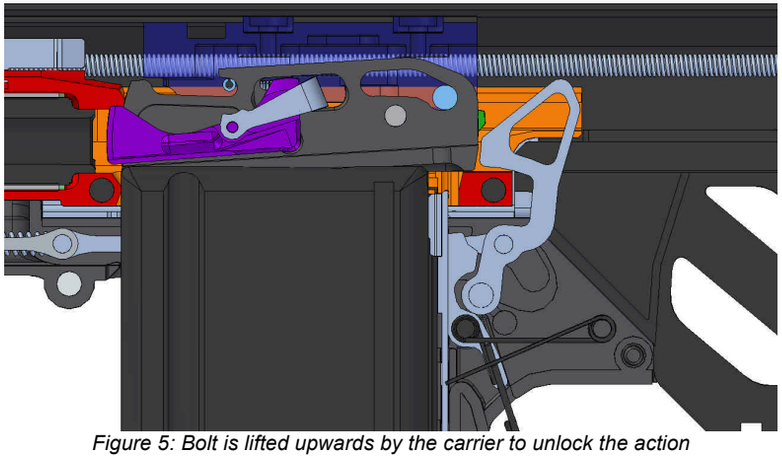


Figure 5: Bolt is lifted upwards by the carrier to unlock the action

The base of the magazine should then be soundly smacked with the palm of the hand to ensure proper seating.
The shooter must then load the rifle by pulling back on the charging handle and releasing it.

Figure 6: Pull back the charging handle shown here in Orange

Figure 7: DO NOT RIDE THE CHARGING HANDLE! Release it at its rear most point.

Charging allows the bolt to push a round out of the magazine and into the chamber while simultaneously cocking the internal hammer.

Figure 8: The charging handle is fully to the rear and ready to be released

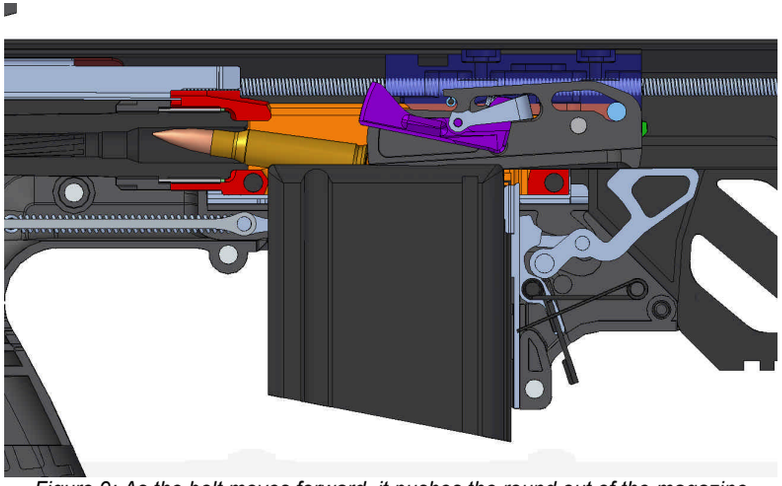


Figure 9: As the bolt moves forward, it pushes the round out of the magazine

When the bolt has traveled to its forward most position the bolt's rear will be pushed downward against a flat bearing surface inside of the receiver called the shoulder. The Extractors on the bolt will then slide downward over the rim of the chambered round and grasp it firmly.

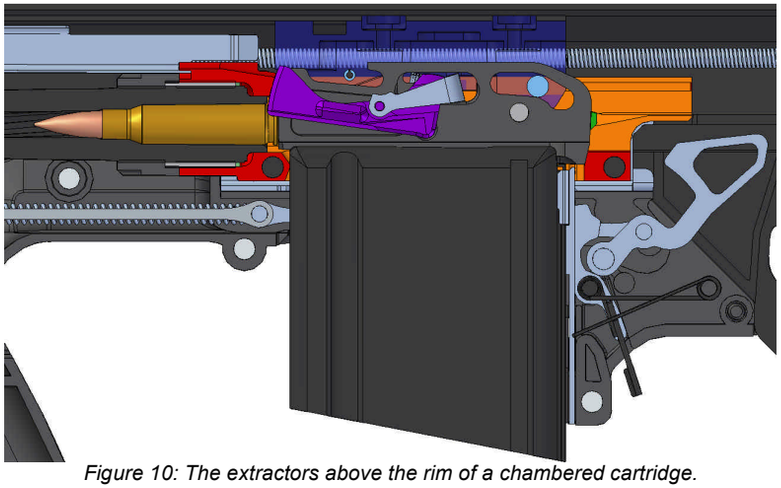
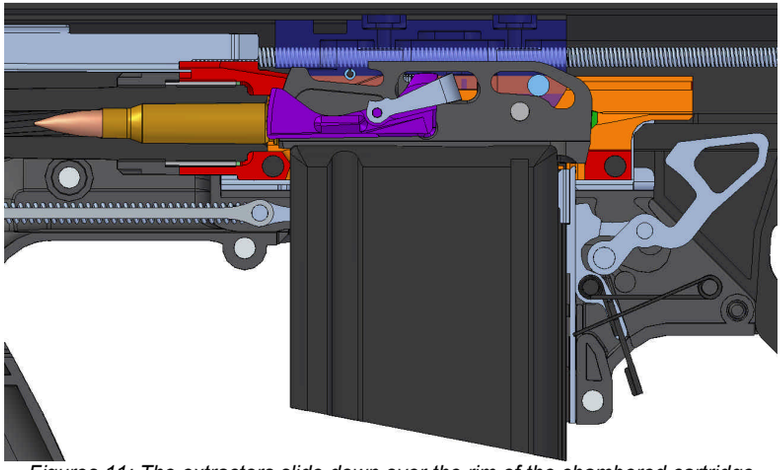


Figure 10: The extractors above the rim of a chambered cartridge.



Figures 11: The extractors slide down over the rim of the chambered cartridge

After the shooter acquires a proper sight picture on the target, move the selector from "S" for "Safe" to "F" for "Fire". Pulling the trigger will actuate the sear, which releases the sear bar linkage that contains the hammer springs.

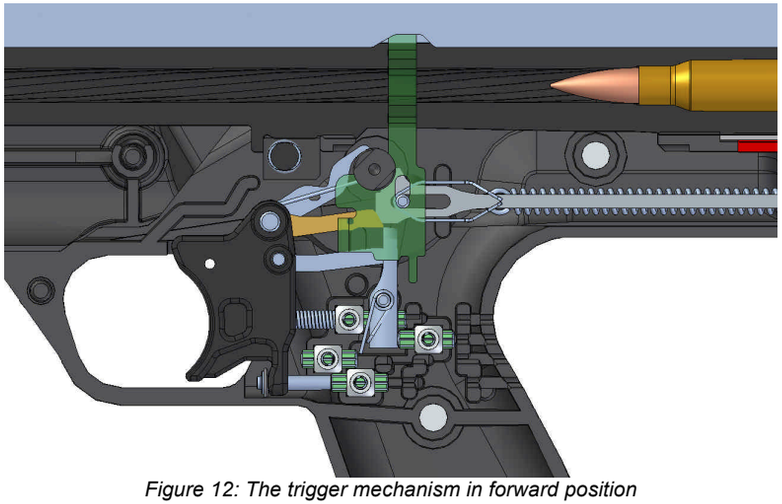
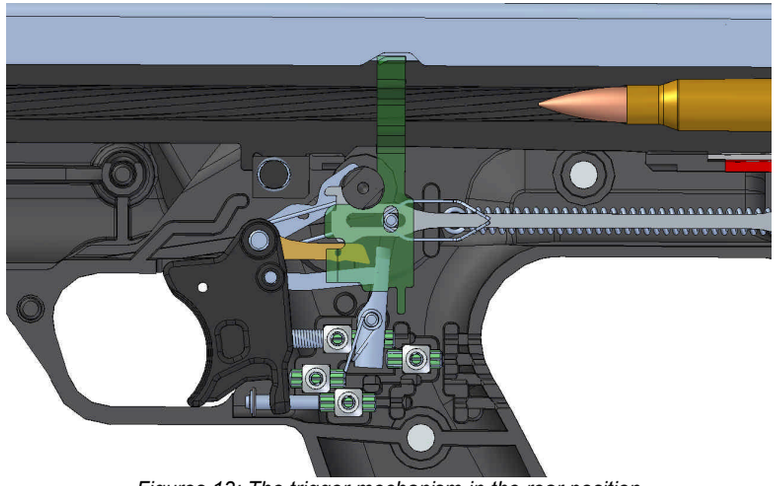


Figure 12: The trigger mechanism in forward position



Figures 13: The trigger mechanism in the rear position

The Linkage will pull the hammer in an upward arc, causing it to strike the firing pin protruding from the rear of the bolt. The firing pin will travel forward a short distance and compress the priming compound against the primer's internal anvil which causes the compound to ignite. The ignited compound then travels through a small flash hole in the base of the cartridge to the propellant, which will ignite and begin to burn extremely rapidly. The pressure of the primer will force the bullet a short distance forward.

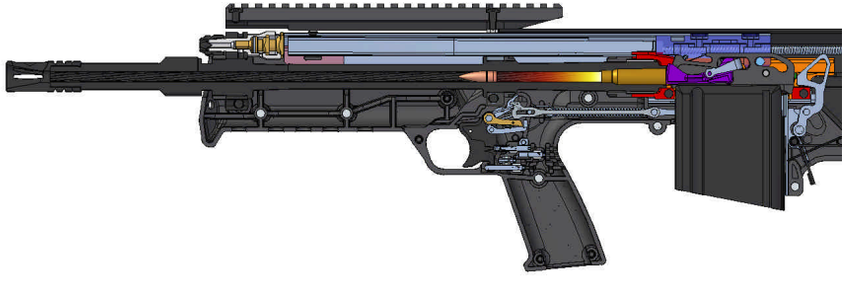


Figure 14: The bullet begins its journey down the bore

As the propellant burns, it creates gas and rapidly increases the pressure to around 50,000 PSI, causing the brass cartridge case to expand and create a seal in the walls of the chamber. This pressure causes the bullet to travel down the barrel at an ever-increasing rate of speed. After the bullet has traveled approximately 11 inches (280 MM) down the barrel, the gas will enter a small orifice on the inside wall of the bore of the barrel, which leads to the gas system.

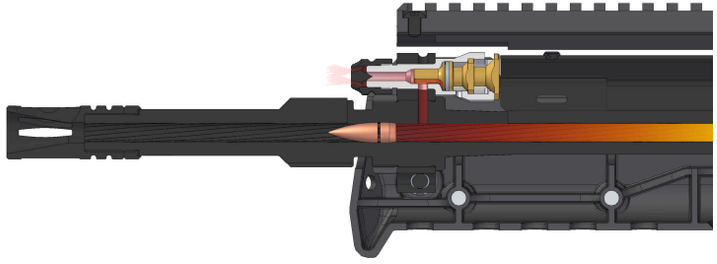


Figure 15: As the bullet passes the gas orifice in the barrel, burning gas enter the gas system

The pressure will very rapidly increase inside of the gas system even as it begins to vent out of the front of the *gas head*. The gas will begin to push the short stroke *piston* rearward. By this time, the bullet has long made its exit from the rifle's muzzle.

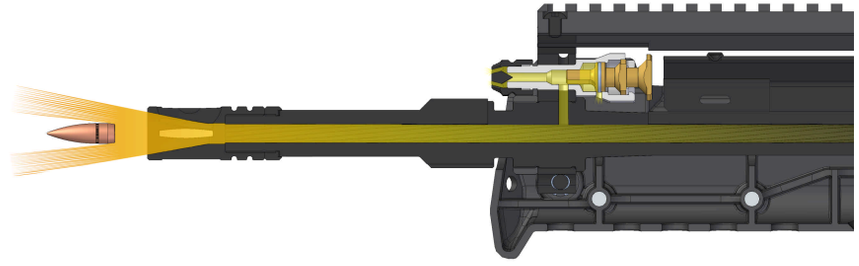


Figure 16: By the time the gas has opened the action, the bullet has left the muzzle

The short stroke *piston* will push back on the *bolt carrier* with immense force, which causes the carrier to lift the rear of the *bolt* out of contact with the receiver's locking shoulder that keeps the breech closed during firing.

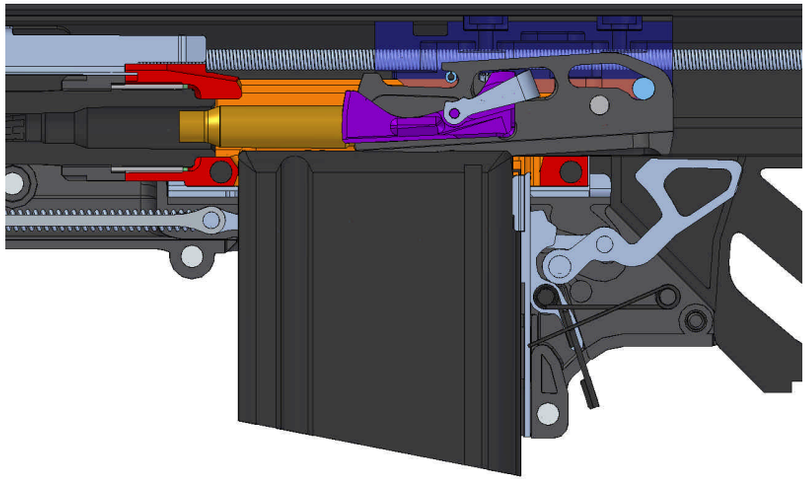


Figure 17: The Extractors pull the fired case from the chamber

The *bolt* is now free to travel backwards with the *bolt carrier*. As it moves backwards the *extractors* will pull the fired brass from the chamber and begin to cam it upwards, pointing the brass at a twelve to fifteen degree angle towards the *ejection chute* ramp.

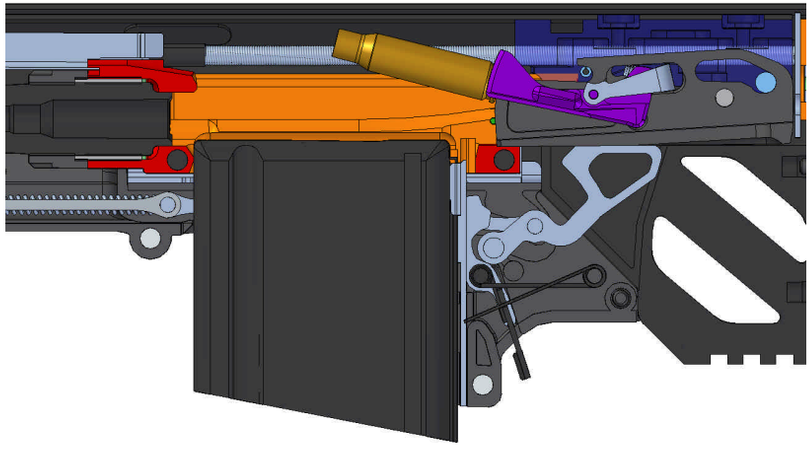


Figure 18: When as the bolt travels backwards, the extractors lift the case upwards

When the bottom of the forward edge of the bolt travels far enough back to clear the rim of the next cartridge in the magazine, the next round is forced up by the magazine spring and is ready to be pushed into the chamber.

After the *bolt* and *bolt carrier* have reached their rearmost point of travel, the *recoil springs* will begin to push the assembly forward. This will cause the previously fired

brass to come into contact with the *ejection chute* ramp while simultaneously pushing the next round in the magazine forward out of the magazine and into the chamber.

The empty brass continues forward through the ejection chute and out the ejection opening out through the ejection opening in the gas block.

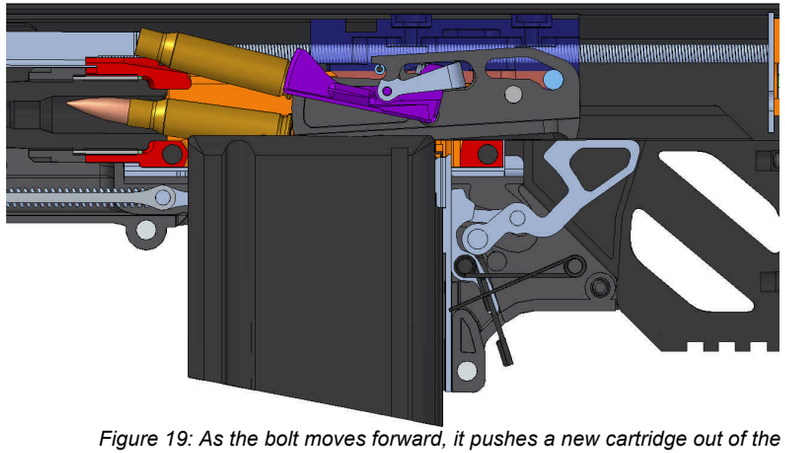


Figure 19: As the bolt moves forward, it pushes a new cartridge out of the magazine and guides the fired case up the ejection ramp

The rim of the fired brass will slide out of the *extractors* as it bears against the ramp and into the *ejection chute*. Once freed, the *extractors* will slide down over the rim of the newly chambered cartridge and the rifle will once again be ready to sight-in on the target and fire.

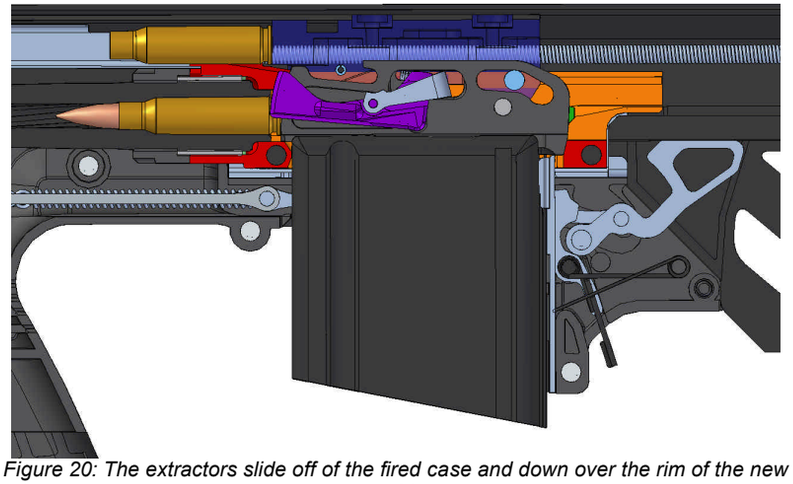


Figure 20: The extractors slide off of the fired case and down over the rim of the new cartridge

Figure 21: The extractors are down, the hammer is cocked, and the rifle is again ready to fire.

All of the above from the time the trigger is pulled until the next round is fully chambered happens in less than one-tenth of a second. After the last round is fired, the bolt stop will hold the bolt open with the last fired case held in the extractors, ready to be ejected when the bolt stop is released.

Use and Mounting of a Sling

The RFB comes equipped with forward attachment points on the left and right sides of the handguard as well as a single rear attachment slot, which works for both sides.

Figure 22: The RFB comes with a nylon sling and 20 round magazine shown here

The different sling attachment points on the RFB should be used to mount a standard 1 ¼" Wide Nylon Sling. Accessory sling swivel posts are also available from Kel-Tec for those who wish to use different sling styles. To mount the sling swivel, follow the instruction sheet included with the sling kit.

Loading and Firing

After ensuring that the rifle is properly assembled and in good working order, ensure the rifle is on "S" for Safe and load the appropriate amount of 7.62 NATO ammunition into the

magazine to be used. Insert the magazine into the magazine well with a firm upward thrust. A tilting action is not required to seat the magazine into the RFB. Using the palm of your hand, give the magazine's floor plate a firm smack and then a gentle tug to guarantee the magazine is fully seated.

Figure 23:Smack the base of the magazine with the palm of your hand

Pointing the rifle in a safe direction and with the safety on, pull back the Charging Handle and release it to chamber a round. Do not ride the charging handle. Make sure that it is fully forward by pushing forward on the charging handle. Visually verify that there is little or no gap between the Gas Piston and front edge of the carrier. Take a proper shooting position and acquire a target. Move the Safety Selector forward from "S" for "Safe" to "F" for "Fire", to ready the rifle for use. Gently squeeze the Trigger to fire the rifle.

Figure 24: Move the safety selector from Safe to Fire

On FAL Type Magazines

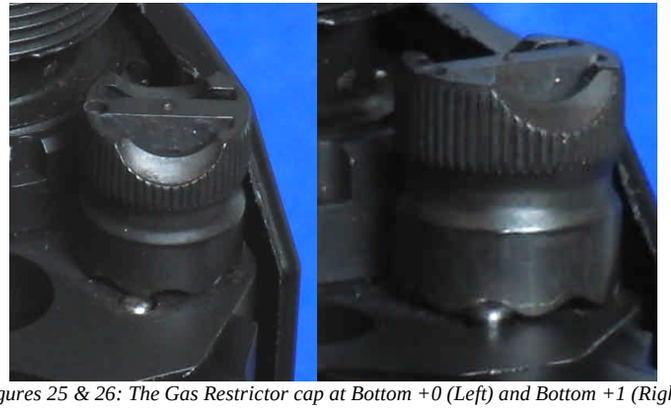
The RFB uses magazines that were originally designed for FN's Fusil Automatique Leger ("Light Automatic Rifle") or FAL rifle. While being a good design that went on to be adopted by more than 70 countries worldwide during the cold war, the rifle's

design itself has long since shown its age. The magazine, however, is still very good and the ubiquitousness of this type of magazine ensures that they will be available for a very long time at very low prices. These magazines have been made in a dozen countries or more over the last half century and as a consequence they vary widely in their dimensions and specifications. The most common of the FAL style magazine is the “Metric Pattern” that is also used in the RFB and the “Inch Patten” FAL Magazines of British, Canadian, Australian origin will not work without modification to the front tab.

The problem with a design that was so common for so many decades is that some magazines have been very well made but have seen hard use and abuse in training, in wars, and in conflicts all over the world in 50+ years. Others have been very poorly made but used very little or kept in storage for decades. This means there are no guarantees with these magazines based on appearance and one that works fine in one rifle may not work in another. All magazines must be tested before service use. Most malfunctions can be attributed to faulty, damaged, or dirty magazines. However these magazines are easily repaired by anyone possessing a small amount of mechanical skill and knowledge. If you have experienced any functioning problems with your RFB, make a note as to which magazine the problem occurred and repair or replace that magazine as soon as possible. Kel-Tec CNC, Inc. does not warranty repairs due to malfunctions caused by aftermarket magazines.

To Adjust the Gas System

The gas system may require adjustment for a variety of reasons, such as different ammunition loadings, change in environmental conditions, fouling and carbon build-up from improper or infrequent cleaning, or moving to a less stable shooting position. To find the optimum gas system setting, ensure that the gas restrictor cap is cool enough to touch, and then turn it Clockwise until it is completely bottomed out and closed. Note: The bottom or closed position will not always align a slot on the regulator with the Adjustment pin.



Figures 25 & 26: The Gas Restrictor cap at Bottom +0 (Left) and Bottom +1 (Right)

The first slot that it aligns with is called Bottom +1. When you have found the bottom most position, turn the regulator 1 and 1/4 turns (10 positions, Bottom +10) Counter-Clockwise to open it up. This is normally not enough gas to allow the rifle to function in most environments. While on the firing line at a range, load one round into the magazine and fire the rifle as you would normally making sure all safety rules are followed. When the rifle fires, the *bolt stop* should be automatically activated by emptied magazine’s follower.

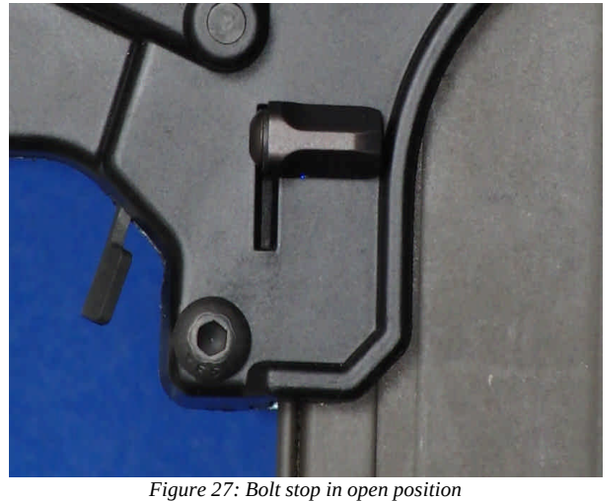


Figure 27: Bolt stop in open position

If it is not, ensure the rifle is unloaded and turn the gas restrictor cap clockwise one position to Bottom +9 and repeat the test until the *bolt stop* activates from your chosen shooting position with you selected ammunition. Close the gas restrictor cap 1 or 2 more clicks. This will ensure reliable function with the minimum amount of recoil necessary to operate the action. If the gas restrictor cap becomes too hot or too fouled to adjust by hand, seat the rim of a 7.62 NATO cartridge in the slots on top of the gas restrictor cap to adjust it.

Figure 28: Using the rime of a cartridge to turn the gas restrictor cap

Adjusting the Gas System for Suppressor Use

When using a suppressor on your RFB, it will be necessary to adjust your gas system in order to function with the increased backpressure created by the suppressor. Before use, turn the gas restrictor cap (RFB-161) counter clockwise until comes off of the gas head, then screw the cap back on one and a half turns to insure that it does not come off during shooting.

Figure 29: Gas Restrictor Cap set for suppressor use.

This will reduce pressure in the system enough to allow proper functioning without excessive recoil on operating components. NOTE: When using a suppressor with the RFB, it will be necessary to perform cleaning operations and basic maintenance more frequently. Avoid use of Subsonic Ammunition in the standard RFB when using a suppressor. See note in the warning section of this manual.

Unloading and Clearing the Rifle

It will be necessary to unload your RFB for storage, transportation, and disassembly purposes. To unload the RFB, first ensure that the selector is on safe. Keeping the rifle pointed in a safe direction and your finger off of the trigger, remove the magazine by pressing the magazine release and pulling out the magazine. Resting the butt of the RFB against your hip, pull back the charging handle with your support hand and maintain tension on the charging handle. With the rifle supported in this way, carefully reach back and move the bolt stop upward, and slowly relax tension on the operating handle to lock the bolt open. Grasp the center of the rifle between the pistol grip and the magazine well and turn the rifle over.

Use your support hand to push on the bottom of the Bolt Stop to ensure that it does on close on your fingers, inspect the inside of the rifle and make sure that there is no live ammunition or brass cases in the extractors or chamber. If a case is held by the extractors, manually cycle the action to eject it from the ejection chute. If the case is damaged or will not eject, hold the bolt stop open and press on the case body to free the case from the extractors, then turn the rifle over to allow the case to fall free.

Field Stripping

If the rifle has been fired, wait a least one-hour for the metal components to cool before attempting disassembly. Do not use cleaning solvents or any lubrication on any metal surfaces while the rifle is hot as this will cause microscopic fractures in the surface of the metal and reduce service life. The rifle should be pointed muzzle down at all times during disassembly. Do not point the rifle upward when disassembled, as resting it on the cocked hammer and the firing mechanism may potentially damage them.

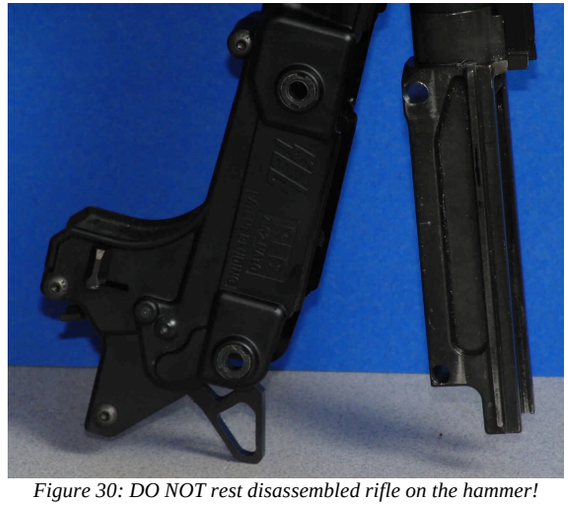
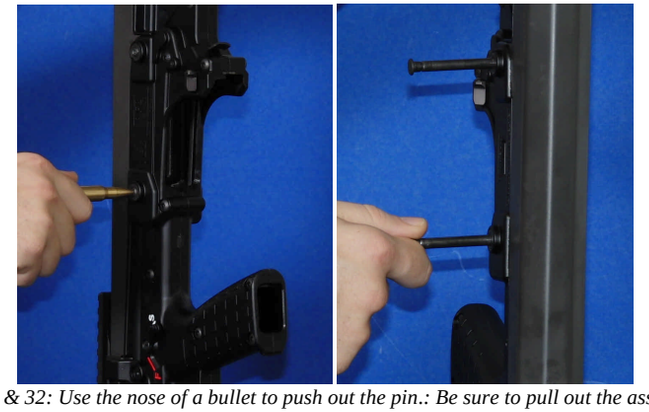


Figure 30: DO NOT rest disassembled rifle on the hammer!

In order to field strip the RFB for cleaning, first ensure that the rifle is unloaded by removing the magazine and cycling the action. Put the rifle on safe, remove the magazine and pull back and hold the charging handle. Lock the *bolt* back lifting and holding the *bolt stop* and then slowly release the charging handle. Apply and hold upward pressure to the bottom of the *bolt stop* to prevent the bolt from closing on fingers. Look inside the magazine well and feel to ensure that there are no rounds in the chamber. .After checking the chamber, allow the bolt to go forward and place the rifle muzzle down on a non-marring surface. Do not dry fire the rifle, as the dropped hammer will prevent disassembly. Using the nose of a dummy cartridge or similar object, push both the Rear Assembly Pins from the left side. (Note: Do not use excessive force on the Assembly pins!) Pull the pins out the right side as far as they will go.



Figures 31 & 32: Use the nose of a bullet to push out the pin.: Be sure to pull out the assembly pins out as far as they will go

Giving a firm downward slap on the back of the pistol grip will rotate the grip downwards, exposing the receiver. If the grip does not rotate down, verify that both assembly pins are out all the way and that the hammer is cocked. Then try again.

Figure 33: After the pins are pulled out, slap the back of the pistol grip to open the assembly

Now, remove the top cover and buttstock assembly by firmly grasping the buttstock and pulling straight off.

Figure 34: When the action is opened, pull the top cover off

Pull back the Bolt Carrier Assembly by the charging handle until it reaches the clearance slot in the handguard.

Figure 35: Pull the charging handle back until it aligns with the slot in the handguard to remove it

Grasp the receiver and the Bolt Carrier Assembly with one hand, pull the Charging Handle out with your free hand as shown in figure 37.

Figure 36: While grasping the carrier and receiver, pull the charging handle straight out to remove it

Now pull the Bolt Carrier Assembly past the Grip Mount to remove it from the rifle.

Figure 37: Once the charging handle is removed, pull out the carrier assembly

The Rear Assembly Pins may be pushed back into their housing, keeping the assembly from closing. The hammer may prevent a cleaning rod from entering the chamber if the Rear Assembly Pins are aligned with the holes in the receiver as when the rifle is assembled.

The Forward Assembly Pin may be pushed free with a Dummy Cartridge in the same way as the Rear Assembly Pins in order to give access to the Gas System and Ejection Chute. (Note: Do not use excessive force on the Assembly pins!)

Figure 38: Use the nose of the bullet to push out the forward assembly pin

After the Pin is pulled out as far as it will go, firmly grasp the hand guard with one hand and the barrel with the other, pull the handguard away from the barrel. Do not pull on the Forward Assembly Pin for leverage as this may damage the pin!

Figure 39: Grasp the barrel with one hand and pull down the handguard

The central assembly pin may be pulled out to remove grip and handguard assembly from the barrel assembly for cleaning and maintenance. Disassembly of the grip is NOT recommended. To thoroughly clean the inner crevices of these assemblies, use a polymer-safe sprayable gun cleaning solution and coat all surfaces. Allow for several moments for the cleaner to soften accumulated fouling, and then use compressed air to blow out dirt and particles. Use rags and cotton swabs to clean accessible exposed surfaces. Spray a light oil onto metal components to prevent corrosion.
To remove the Ejection Chute, with the handguard pulled away from the barrel, gently press on the right side of the chute in the space underneath the Sight Rail and behind the gas block.

Figure 40: Push the ejection chute on the right side to remove it

This will allow the Ejection Chute the to be pulled forward and free of the rifle.

Figure 41: Pull the ejection chute forward to remove it

Removing the Bolt from the Carrier Group

The Bolt Carrier Group may be disassembled into its individual components for periodic maintenance and cleaning. After the Bolt Carrier Group has been removed from the rifle during field stripping, the Bolt Camming Pin may be pushed out from the right side using the nose of a dummy cartridge. No further disassembly of the carrier group is necessary or advisable.

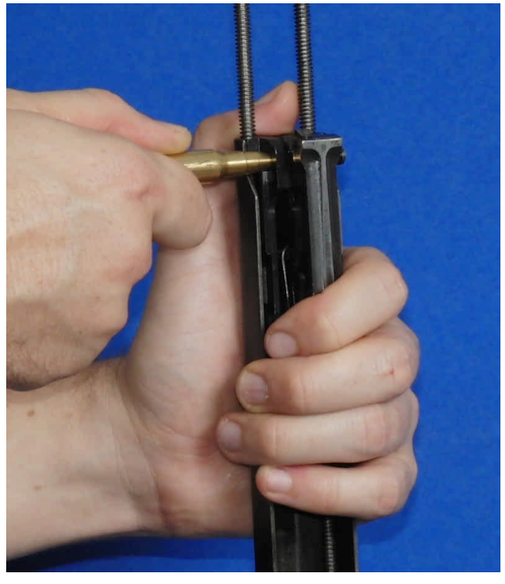


Figure 42: Push out the cam pin with the nose of a bullet

The pin should remain captive in the carrier. The Bolt is now free of the Bolt Carrier Group.

Figure 43: With the pin pushed out, the bolt is easily removed

Firing Pin Removal and Extractor Inspection

It will be necessary to periodically remove the firing pin for cleaning and inspection. Take the bolt and press the rear of the firing pin against a hard flat surface to compress the firing pin spring. Take a punch or nose of a bullet and press out the Firing Pin Retaining Pin.

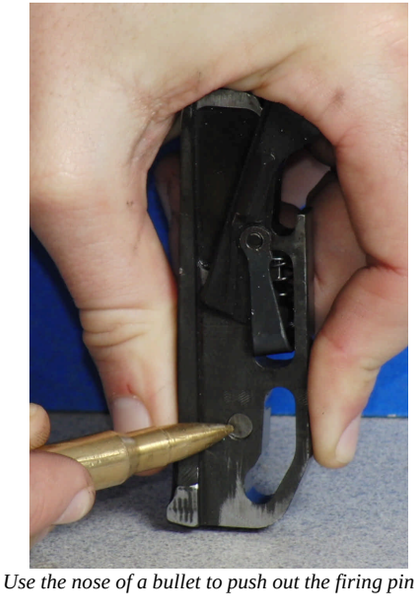


Figure 44: Use the nose of a bullet to push out the firing pin retaining pin

Slowly reduce the downward pressure against the bolt to release the firing pin. Check to ensure the extractors are not damaged or broken. Take an empty case and insert the rim into the extractors and make sure that the extractor spring lifts the empty case upward smoothly and without resistance. Check that the Extractor Clamp Spring is properly

aligned with the slots on the Extractors. Any further Extractor disassembly or maintenance should be conducted only by an experienced Armorer or Gunsmith. Clean and lightly lubricate all surfaces of the Bolt and Bolt Carrier Assembly in order to maintain proper functioning. Reassemble Bolt Carrier Group in reverse order. Be certain to have the extractors in the lowered position in order to hook the top of the bolt into the carrier. The cam pin may then be pressed in to hold the bolt. The extractors must then be pushed into the up position to allow the insertion of the bolt carrier group into the receiver.

Switching the Charging Handle for Left or Right Hand Use

The RFB is a totally ambidextrous design. All necessary controls can be accessed by either a right handed or left handed shooter, except the Charging Handle, which can be mounted on either the left or right side of the Bolt Carrier during reassembly. It may be advisable to mount the charging handle on the strong side or dominant hand side to prevent obstructing the view of the target.
To switch the charging handle, pull out the forward assembly pin and lower the handguard. Remove the charging handle by pulling it straight out. Insert the charging handle on the side you prefer, close the handguard, align the assembly pin hole with the hole in the gas block, and press in the pin.

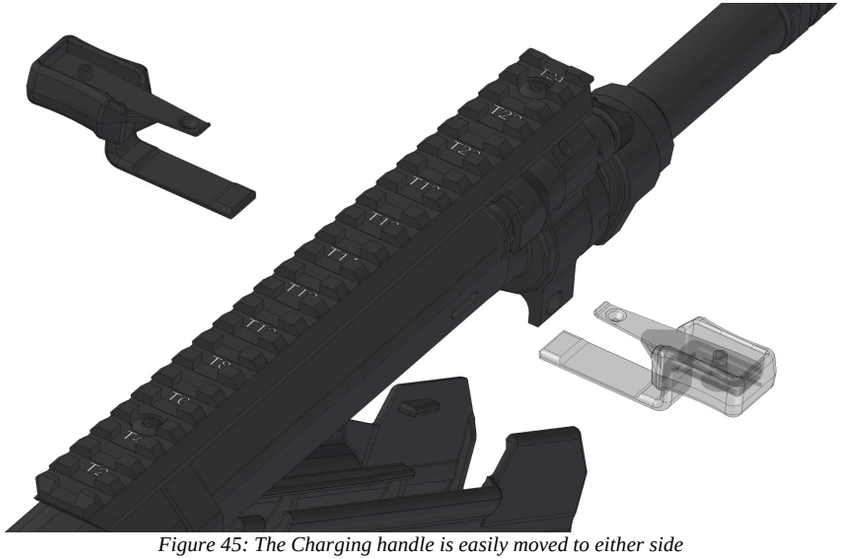


Figure 45: The Charging handle is easily moved to either side

Disassembling the Gas System

To remove the Gas Piston for cleaning, first ensure that the rifle is cool and unloaded. Next, completely disassemble the rifle as you would for normal maintenance by removing the Top Cover, Carrier Channel, and Ejection Chute. The Gas Piston is now ready for removal. Gently pry the piston backwards to its fully open position.

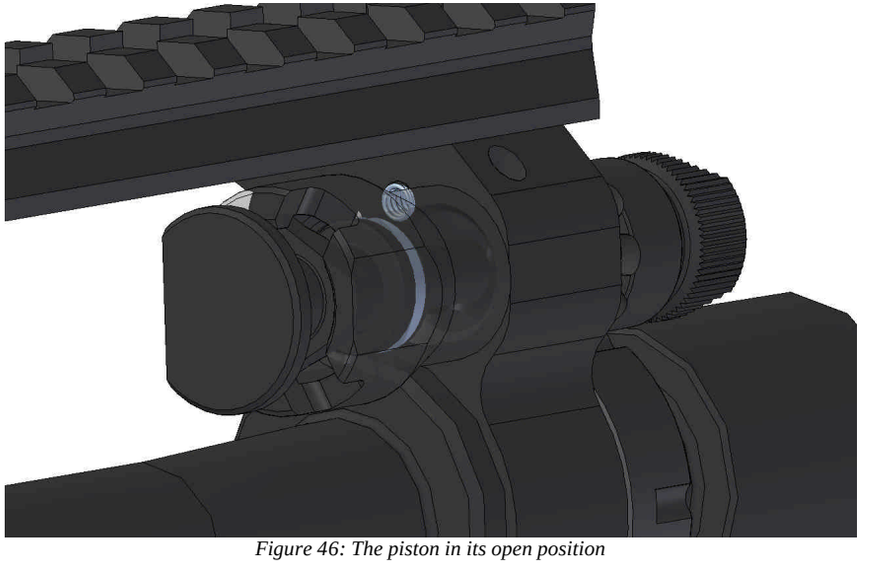


Figure 46: The piston in its open position

Twist the Gas Piston 60 degrees to align the internal lugs with the slots cut into the gas head.

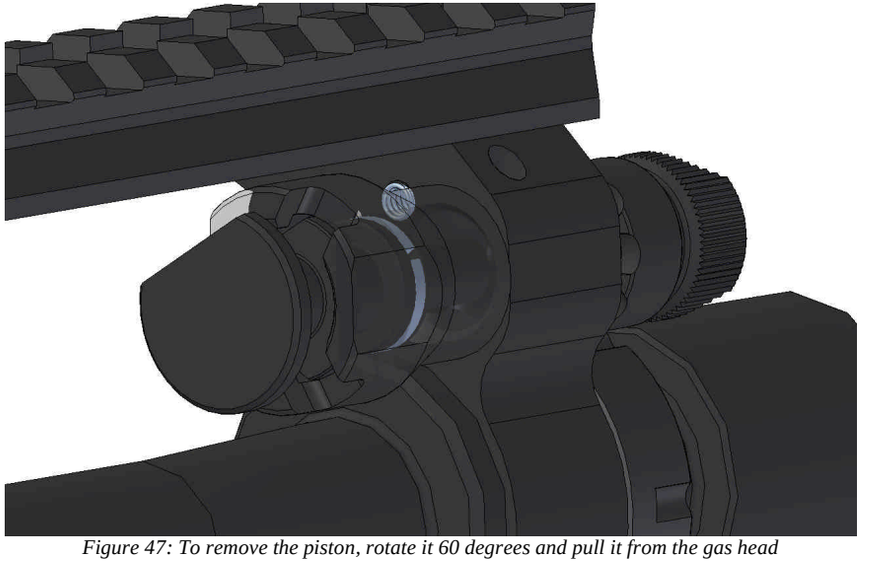


Figure 47: To remove the piston, rotate it 60 degrees and pull it from the gas head

Wiggle and pull the Gas Piston free from the Gas Head. Do not use excessive force as this may cause damage to the gas ring.

Figure 48: Wiggle the piston to remove

Warning: Never fire your RFB with the Gas Piston Removed or improperly installed. Failure to properly install the Gas Piston may result in serious injury. Ensure that the gas ring is in good shape and not excessively worn. It will be necessary to replace this ring every 3-5 thousand rounds. A one-piece gas ring designed for the AR-15/M-16 rifle will fit.

The Gas restrictor cap must also be removed for periodic cleaning. First, ensure that you know how many slots up from the bottom, or closed position; you have your gas system set and make a note of it. For example: Bottom +7. Now, press down on the spring loaded Gas System Adjustment Pin with the nose of a dummy round and twist the Gas restrictor cap open until it comes off and gently reduce pressure on the retaining pin.

Figure 49: Use the nose of a bullet to push the pin in for disassembly

This pin is captive, so it should not be necessary to remove the pin and spring during regular cleaning. The Gas System is now ready to be cleaned. Be sure to remove all lubricants and cleaning solvent residue before reassembly. Reassemble in reverse order.

Figure 50: The gas restrictor cap is disassembled and ready to be cleaned

Reassembly of the RFB

To reassemble the RFB after field stripping, first pull the Front Assembly Pin to the open position. Confirm that the Gas System has been properly reassembled and that the Gas Piston is properly installed and is flush with the Gas Head in the closed position. Take the Ejection Chute and insert it through the opening in the grip mount. Align the wings at the rear of the chute with the slot on the front of the receiver at the top of the ejection ramp. Slide the front of the Ejection Chute into the slot on the Gas Block. Close the Hand Guard and ensure that the pin hole on the Gas Block is aligned with the pin hole in the handguard. Then push in the Forward Assembly Pin.

Now take the Bolt Carrier Group and lay it on top of the receiver and slide it into the grip mount. If the bolt is hanging down, swing the bolt up and hook it to the carrier, and move the extractors up. The extractors must be in the up position.

Figure 51: Be sure that the extractors are in the up position and that the rear of the bolt aligns with the carrier before insertion into the receiver

Slide the Carrier Group forward until the slot for the charging handle is just past the edge of the Grip Mount.

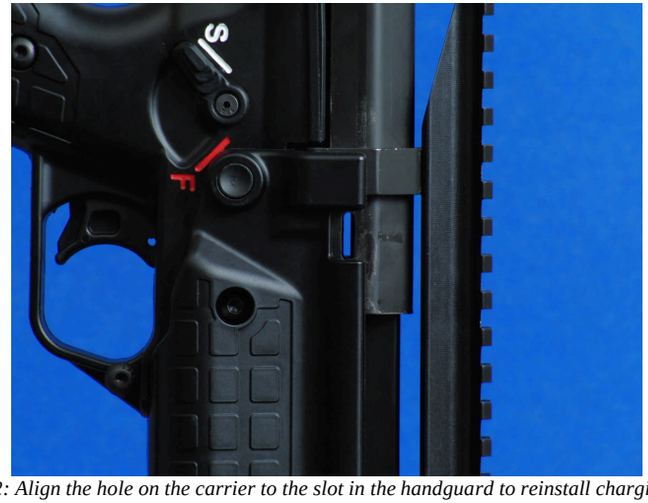


Figure 52: Align the hole on the carrier to the slot in the handguard to reinstall charging handle

Install the charging handle on the side you prefer. Now, pushing up on the bottom of the Bolt and keeping it forward in the carrier gently slide the carrier group home. DO NOT FORCE FORWARD IF RESISTANCE IS FELT! THIS WILL CAUSE THE BOLT TO JAM! The Bolt should be pushed forward with the rear of the bolt aligning to the rear of the carrier at all times.

Slide the Top Cover over the Bolt Carrier Group and Receiver. Pull out the Rear Assembly Pins to their open most position. Slightly compress the Recoil Springs by pressing against the Butt on the Top Cover and close the grip assembly. Look to see that the holes of the Grip Assembly, Top Cover, and Receiver are fully aligned and push in the Rear Assembly Pins. Cycle the action to verify proper function. The rifle is now assembled. Note: Do not use excessive force on the Assembly pins!

Questions? Comments? Concerns?

If you need help in operating any of our products, have any questions about their safe handling, need something repaired, or you just want to tell us what you think, please write or email us at:

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Website: http://www.keltecweapons.com/
Email: ktcustserv2@kel-tec-cnc.com

Trouble Shooting Guide:

Problem:
When I pull the trigger, the hammer does not release.

Possible Cause:
Disconnector is stuck down.

Solution:
Disassemble the rifle and ensure that the Disconnector is not damaged or blocked by debris. Use compressed air to clean trigger group of dust and obstructions.

Problem:
When firing, the bolt and carrier will not return to battery because it's "stuck open".

Possible Cause:
Rifle has double fed.

Solution:
Select a different magazine. FAL magazines have been produced in dozens of countries over the last fifty years and many have seen hard use. Some may not work with every gun in which they are used. Be certain to test every magazine you buy for reliability before you use the rifle.

Problem:
When I attempt to chamber a round it will not feed from the magazine.

Possible Cause:
Magazine is not properly seated.

Solution:
Lock open the action using the *bolt stop*. Remove the magazine. Clear any lose or partially fed rounds. Reinsert the magazine. Firmly smack the bottom of the magazine to ensure it is properly seated. Attempt to chamber a round. Down loading the magazine by one or two rounds will make seating easier. If this is unsuccessful, select a different magazine.

Problem:
Failure to extract/empty case is still in chamber.

Possible Cause 1:
Extractor spring clamp has broken or come out of alignment.

Solution 1:
Unload and disassemble the rifle. Closely inspect the extractor tips and the Extractor spring clamp. If the clamp is simply out of alignment, use a slotted (flat head) screwdriver to seat them back in the holes on the rear of the extractors. If the Extractor Spring Clamp is damaged or broken, the rifle will require service by a qualified gunsmith.

Possible Cause 2:
The Gas System is set too low for the ammunition, magazine, or shooting position selected.

Solution 2:
Adjust the Gas System Regulator clockwise one position. Load one round into a magazine, insert magazine, chamber round and fire. The bolt should lock back, if not repeat this process until it does. This will be the proper gas setting.

Problem:
Rifle has excessive recoil.

Possible Cause:
Gas System is adjusted too high.

Solution:
Adjust the Gas System Regulator by turning it counterclockwise the appropriate amount of positions. Check for function by loading one round in the magazine and firing until the bolt holds open. The lowest position on which the bolt locks open consistently after the last shot is the highest setting necessary for proper operation.

Problem:
Bolt stop does not engage after the last round is fired.

Possible Cause 1:
The magazine follower is too short to activate the bolt stop.

Solution 1:
Select another magazine. FAL magazines have a wide variance in tolerance and not all magazines will function properly in every firearm.

Possible Cause 2:
Gas System is adjusted too low.

Solution 2:
Adjust the Gas System Regulator clockwise one position. Load one round into a magazine and insert it into the rifle. Chamber round and fire. Repeat adjustments until bolt locks open consistently.

Possible Cause 3:
Magazine spring is excessively weak and is not strong enough to lift bolt stop.

Solution 3:
This magazine spring must be replaced. Use a different magazine until springs can be located.

Problem:
Rifle jams after fifth round consistently.

Possible Cause:
The ejection chute is not properly aligned with the Ejection chute port at the front of the rifle.

Solution:
Unload the rifle. Disassemble the rifle. Pull down the handguard by pulling out the Forward Assembly Pin. Ensure there is no debris blocking the chute and that it is properly attached. Take an empty case and insert it into the rear of the ejection chute. Angling the rifle downward, release the empty case and see if it jams. Attempt to realign the Ejection Chute to clear. If problems persist, consult a qualified gunsmith.